

# **RCRA, Superfund & EPCRA Hotline Training Module**

**Introduction to:**

**Universal Waste  
(40 CFR Part 273)**

**Updated October 1999**

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### **RCRA, Superfund & EPCRA Hotline Phone Numbers:**

National toll-free (outside of DC area)	(800) 424-9346
Local number (within DC area)	(703) 412-9810
National toll-free for the hearing impaired (TDD)	(800) 553-7672

The Hotline is open from 9 am to 6 pm Eastern Time,  
Monday through Friday, except for federal holidays.

# UNIVERSAL WASTE

## CONTENTS

1. Introduction .....	1
2. Regulatory Summary .....	2
2.1 Wastes Subject to the Universal Waste Program .....	2
2.2 Universal Waste Handlers .....	4
2.3 Transporters .....	7
2.4 Destination Facilities .....	7
2.5 State Authorization .....	7
3. Special Issues .....	9



## 1. INTRODUCTION

As mandated by Subtitle C of the Resource Conservation and Recovery Act (RCRA), EPA promulgated regulations governing the safe management of hazardous waste from the point of generation until the point of final deposition. Within these regulations, EPA developed a streamlined management program for certain hazardous wastes, known as universal wastes. The universal waste program provides an alternative set of regulations which reduce the regulatory burden by allowing longer storage of these wastes and reduced recordkeeping. Universal wastes are:

- Generated in a wide variety of settings, not solely industrial
- Generated by a vast community
- Present in significant volumes in nonhazardous management systems.

This module describes the universal waste program, found in 40 CFR Part 273, and defines which hazardous wastes may be handled under these streamlined regulations. When you have completed this module, you will be able to:

- Recognize the wastestreams subject to the universal waste program
- Identify the participants in the universal waste program
- Understand the regulations for each type of participant
- Understand the state authorization procedures
- Understand the relationship of the Mercury-Containing and Rechargeable Battery Management Act (P.L. 104-142) to EPA's universal waste program.

Use this list of objectives to check your knowledge of universal waste after you complete the training session.

## 2. REGULATORY SUMMARY

The regulatory burden associated with recycling certain widely generated hazardous wastes discouraged smaller facilities from recycling these materials. Because they were often produced by households and conditionally exempt small quantity generators (CESQGs), these hazardous wastes were commonly disposed in municipal solid waste landfills. As a result, EPA promulgated the universal waste regulations on May 11, 1995 (60 FR 25492) to ease the management burden and promote the collection and recycling of these commonly generated wastes. EPA developed the streamlined universal waste regulations in Part 273 with three goals:

- To encourage resource conservation while ensuring adequate protection of human health and the environment
- To improve implementation of the current Subtitle C hazardous waste regulatory program
- To provide incentives for individuals and organizations to collect the unregulated portions of these universal wastestreams and manage them using the same systems developed for the regulated portion, thus removing them from the municipal wastestream.

To accomplish these goals, EPA established standards in 1995 for three types of universal wastes: batteries, pesticides, and thermostats. On July 6, 1999, EPA added hazardous waste lamps to the universal waste regulations (64 FR 36466). The regulations also include management standards for four types of persons managing universal waste: small quantity handlers of universal waste (SQHUW), large quantity handlers of universal waste (LQHUW), universal waste transporters, and universal waste destination facilities.

The universal waste program is less stringent than the full Subtitle C hazardous waste regulations. Because authorized states may enforce regulations that are more stringent than the federal RCRA program, the universal waste program is not automatically effective in states with their own RCRA programs. However, once a state is authorized for universal waste, EPA allows states to include additional universal wastes under their state program. The following sections of this module will describe the regulations for each category of universal waste and each type of person managing universal waste, the state authorization process, and other special issues.

### 2.1 WASTES SUBJECT TO THE UNIVERSAL WASTE PROGRAM

The federal universal waste regulations cover hazardous waste batteries, thermostats, pesticides, and lamps. To be covered under the universal waste program, these items must first be hazardous wastes. Items that still have product value and are still being

used are not wastes and therefore are not subject to RCRA. In addition, wastes excluded from RCRA under the definition of solid or hazardous waste are not subject. A material identified as a hazardous waste and meeting the definition of battery, thermostat, pesticide, or lamp under Part 273 can be managed under the universal waste regulations.

Although EPA's primary goal for the universal waste program is to encourage recycling, batteries, thermostats, pesticides, and lamps being sent for disposal may also be managed under the universal waste regulations. The universal waste program does not mandate recycling. Currently, only these four wastes are covered under the federal program. There is, however, a petition process in Part 273, Subpart G, that allows individuals, as well as states, to petition EPA to add other wastestreams to the universal waste program. Universal wastes that are mixed with hazardous wastes are handled under the full hazardous waste regulations. However, mixtures of universal waste and CESQG waste or household hazardous waste are subject to the universal waste requirements since these hazardous wastes are not subject to full Subtitle C regulation.

The first wastestream covered under the universal waste program is hazardous waste batteries. The universal waste regulations define a battery as a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electrical energy (§273.6). Also included in this definition are unbroken batteries from which the electrolyte has been removed. Hazardous waste batteries meeting this definition will be subject to the universal waste regulations. However, lead-acid batteries being recycled may be managed either as universal waste or under Part 266, Subpart G, which contains special provisions for lead-acid batteries. EPA does not have comprehensive data to make interpretations about whether certain battery types are always or never hazardous, so it is up to the generator of a waste battery to determine if that battery is subject to regulation as a hazardous waste.

The second waste type included under the universal waste program is certain hazardous waste pesticides. Unused pesticides will often become banned for use, damaged by temperature extremes, or no longer necessary due to crop changes. The universal waste regulations apply to persons managing pesticides that are part of a recall program or unused pesticides which are collected and managed as part of a waste pesticide collection program (§273.3(a)). A recalled pesticide becomes a waste on the date that two conditions occur: the generator agrees to participate in the recall, and the person conducting the recall decides to discard the pesticide or burn it for energy recovery. An unused pesticide becomes a waste on the date the generator decides to discard it (§273.3(c)). Pesticides managed by farmers in accordance with §262.70, which allows farmers to dispose waste pesticides on their own farm following the disposal instructions on the pesticide label, are not subject to the universal waste regulations (§273.3(b)).

The third category of universal waste regulated under the federal program is mercury-containing thermostats. Thermostats are temperature control devices that contain metallic mercury in an ampule attached to a bi-metal sensing element, and mercury-containing ampules that have been removed from these devices (§273.6). The thermostat category only covers those wastestreams that meet the thermostat definition. Other equipment that contains mercury, such as gauges, manometers, relays, and circuit boards, does not meet this definition and is not subject to the universal waste program.

The final wastestream covered under the universal waste program is hazardous waste lamps. Lamps often exhibit the toxicity characteristic (TC) for mercury, or sometimes lead, making them a characteristic hazardous waste when discarded. In 1994, EPA proposed two options for lamp management (59 FR 38288; July 27, 1994), and a 1997 study evaluated mercury emissions from discarded lamps. After responding to comments received on both documents, EPA added hazardous waste lamps to the universal waste regulations. Universal waste lamps are defined as the bulb or tube portion of an electric lighting device (§273.9). Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps. Several states added mercury lamps to their universal waste programs prior to the July 1999 final rule. Therefore, this federal addition will make the management requirements consistent with many state programs. The approach will also encourage the manufacture of low-mercury lamps in industry.

## **2.2 UNIVERSAL WASTE HANDLERS**

Universal waste handlers are people who generate or produce universal waste as well as people who receive universal waste from other generators or handlers and consolidate it before sending it to another handler, recycler, or treatment storage and disposal facility. Handlers accumulate universal waste but do not treat, recycle, or dispose of the waste. The universal waste regulations include requirements for two groups of handlers based on the amount of universal waste accumulated on site at any one time:

- SQHUW - accumulates less than 5,000 kilograms (kg) of all universal waste categories
- LQHUW - accumulates 5,000 kg or greater of all universal waste categories.

Regulations for SQHUWs are found in Part 273, Subpart B, while those for LQHUWs are found in Part 273, Subpart C. Once a handler triggers the LQHUW status, he or she will remain a LQHUW for the rest of the calendar year. However, handler classification can be re-evaluated at the start of each calendar year.



Universal waste handlers are the participants that benefit most from the universal waste program. The reduced regulation, in comparison to the hazardous waste generator regulations, makes it easier for universal waste handlers to store universal waste and send it to a recycling facility. Table 1 provides a comparison between some of the universal waste handler requirements and the hazardous waste generator requirements. Both categories of universal waste handlers are prohibited from disposing of, diluting, or treating universal waste except under limited circumstances as described in the regulations. SQHUWs are not required to notify EPA of their universal management activities, while LQHUWs must notify EPA and obtain an EPA identification number if they do not already have one. On-site waste accumulation is limited to one year for both SQHUWs and LQHUWs. Employees at SQHUW facilities must be trained in basic handling and emergency information while those at LQHUW facilities must be trained based on the employee's responsibilities in handling the universal waste. SQHUWs have no recordkeeping requirements under the universal waste program. Although universal waste shipments do not require a manifest, LQHUWs must maintain records of all universal waste shipments received by and sent from the facility. These records may be in the form of invoices, manifests, or other shipping papers. Transport of universal waste by both SQHUWs and LQHUWs is allowed, but is subject to the universal waste transporter regulations in Part 273, Subpart D.

**Table 1. Universal Waste Handler and Hazardous Waste Generator Requirements**

	<b>SQHUW</b>	<b>LQHUW</b>	<b>CESQG</b>	<b>SQG</b>	<b>LQG</b>
<b>Quantity limit</b>	< 5,000 kg on site §273.6	≥ 5,000 kg on site §273.6	≤ 100 kg/month ≤ 1 kg acute/month §261.5(a) and (e)	Between 100 and 1,000 kg/month §262.34(d)	≥ 1,000 kg/month or > 1 kg acute/month Part 262 and §261.5(e)
<b>EPA Identification Number</b>	Not required §273.12	Required §273.32	Not required §261.5	Required §262.12	Required §262.12
<b>On-site accumulation limit</b>	< 5,000 kg §273.6	No limit	≤ 1,000 kg ≤ 1 kg acute ≤ 100 kg spill residue from acute §§261.5(f)(2) & (g)(2)	≤ 6,000 kg §262.34(d)(1)	No limit
<b>Storage time limit</b>	1 year, unless for proper recovery, treatment, or disposal §273.15	1 year, unless for proper recovery, treatment, or disposal §273.35	None §261.5	≤ 180 days or ≤ 270 days §§262.34(d) & (e)	≤ 90 days §262.34(a)
<b>Manifest</b>	Not required §273.19	Not required, but must keep basic shipping records §273.39	Not required §261.5	Required §262.20	Required §262.20
<b>Personnel training</b>	Basic training §273.16	Basic training geared toward employee responsibilities §273.36	Not required §261.5	Basic training §262.34(d)	Full training §262.34(a)

## **2.3 TRANSPORTERS**

Universal waste transporters are persons who move universal waste shipments from a handler to another handler, a destination facility, or a foreign destination. Unlike the used oil regulations, which allow generators to transport up to 55 gallons of their own used oil without being considered a transporter, the universal waste transporter regulations apply to persons hauling any amount of universal waste.

The universal waste transporter regulations can be found in Part 273, Subpart D. Transporters are subject to the same prohibitions on disposal, dilution, and treatment as universal waste handlers. Hazardous waste manifests are not required for universal waste shipments, but transporters must comply with applicable Department of Transportation (DOT) shipping paper requirements if the universal waste is defined as a hazardous material under DOT regulations. Like hazardous waste transporters, persons who transport universal waste may store the waste for up to 10 days at a transfer facility. Exceeding the 10-day limit requires compliance with the applicable handler regulations.

## **2.4 DESTINATION FACILITIES**

The final person regulated under the universal waste program is the destination facility. These facilities treat, dispose of, or recycle universal waste. Facilities that solely store universal waste are regulated under the handler requirements. As a result, a facility may be a handler for one type of universal waste (e.g., batteries) and a destination facility for another type (e.g., pesticides). In general, a destination facility is subject to full hazardous waste regulations as a treatment, storage, and disposal facility (TSDF), including permitting, general facility standards, and unit-specific standards (§273.60(a)). Destination facilities that recycle universal waste without any prior storage are subject to regulation under §261.6(c)(2). Destination facilities are required to retain records of all universal waste shipments received by and sent from the facility.

## **2.5 STATE AUTHORIZATION**

Because the universal waste regulations provide less stringent management standards for hazardous waste batteries, pesticides, and thermostats, the regulations are not automatically effective in states that are authorized for the RCRA program. As with other sections of the RCRA regulations, states can apply for and become authorized to implement the universal waste program. EPA encourages states to adopt and become authorized for the universal waste regulations since these streamlined requirements encourage recycling of these commonly generated wastestreams.

States that are applying for universal waste authorization or that have received universal waste authorization may include additional wastes in their program. In §273.81, EPA established criteria that a wastestream should meet to be included as a universal waste. States should evaluate potential additional wastes in comparison to these criteria. EPA reviews and approves a state program based solely on the four wastes included in the federal program (i.e., batteries, pesticides, thermostats, and lamps) and does not review state-only universal wastes. However, if EPA finds that a state adds a waste that does not qualify under the federal criteria in §273.81 or that a state is using management standards that are not protective of human health and the environment, EPA can withdraw that state's authorization for the universal waste program.

### **3. SPECIAL ISSUES**

The topic addressed below focuses on issues that relate to the universal waste program and to typical calls received at the Hotline.

#### **THE MERCURY-CONTAINING AND RECHARGEABLE BATTERY ACT**

The Mercury-Containing and Rechargeable Battery Management Act (P.L. 104-142) was signed into law by President Clinton on May 13, 1996. Two main goals of this Act were to decrease mercury content in batteries and to increase voluntary recycling of batteries. Although this Act does not amend RCRA directly, it makes the universal waste regulations effective in all 50 states for the management of:

- Used rechargeable batteries
- Lead-acid batteries not managed under Part 266, Subpart C
- Rechargeable alkaline products
- Certain mercury-containing batteries banned from domestic sale
- Used consumer products containing rechargeable batteries that cannot be easily removed.

States are required to have programs identical to the federal universal waste program for the management of these materials. Hazardous waste batteries that meet the definition in this Act must be managed as universal waste.